

Market Transparency Report

Monthly Guide to the U.S. Retail Fixed Income Markets

February 2020

www.tradeweb.com

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Overview

About the Market Transparency Report

The data and analysis contained in this monthly report are intended to provide transparency into the dynamics of the U.S. Fixed Income markets for retail investors. The report presents the important trends in the market, including trade volumes, most active issuers, yield/spread movements and buy/sell ratios. Retail trades are defined as odd-lot transactions under 100 bonds (i.e. less than \$100,000 par value). The retail market is much smaller than the institutional market on a par value basis, but it accounts for more than 2/3 of the trades that occur in the marketplace.

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Market Commentary

Monthly Change Table for February 2020

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	-11	0.4%	-0.1
CD	-6	-2.4%	-0.8
Corp	-9	-8.5%	-0.1
Municipal	-20	1.0%	-0.1
Treasury	1	0.2%	-0.3

For monthly security trend data, see slides 5, 6 and 7



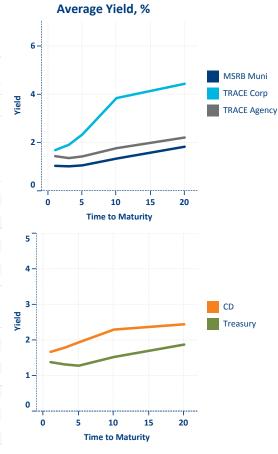
Yield Matrix

Average Yield, % for February 2020

			TTM			Median Maturity
Market	1	3	5	10	20	(Years)
MSRB Muni	1.1	1.0	1.1	1.4	1.8	9
TRACE Corp	1.7	1.9	2.4	3.9	4.4	4
TRACE Agency	1.5	1.4	1.4	1.8	2.2	3
CD	1.7	1.8	1.9	2.3	2.5	1
Treasury	1.4	1.3	1.3	1.5	1.9	0

Asset Class

								Median
Market	Category (Filtered)	Rating Key	1	3	5	10	20	Maturity
								(Years)
		AA	1.5	1.6				1
	Financial	Α	1.6	1.7	1.9	2.3	3.2	3
	rillalicial	BBB	1.9	2.0	2.3	3.2	3.9	5
TRACE -		HY	7.4	2.6	5.7	6.2		9
Corp		AAA	1.4	1.5		1.7	2.6	1
согр		AA	1.4	1.6	1.0	2.1	2.6	1
	Non-Financial	Α	1.5	1.6	1.8	2.3	3.3	4
		BBB	1.8	2.0	2.2	3.3	3.8	5
		HY	3.7	13.9	10.5	7.3	19.4	6
								Median
			1	3	5	10	20	Maturity (Years)
		AAA	1.0	0.9	0.9	1.2	1.8	8
		AA	1.0	1.0	1.0	1.3	1.9	9
	GO	A	1.1	1.1	1.1	1.4	1.9	7
		BBB	1.6	1.6	1.8	1.9	2.0	9
MSRB		HY	2.4	7.7		2.8	1.5	19
Muni		AAA	1.0	1.0	1.0	1.2	1.7	8
		AA	1.0	1.0	1.0	1.3	1.7	9
	Revenue	A	1.1	1.1	1.1	1.4	1.7	11
		BBB	1.4	1.6	1.6	2.0	2.2	15
		HY	2.5	3.2	4.8	3.8	3.2	11



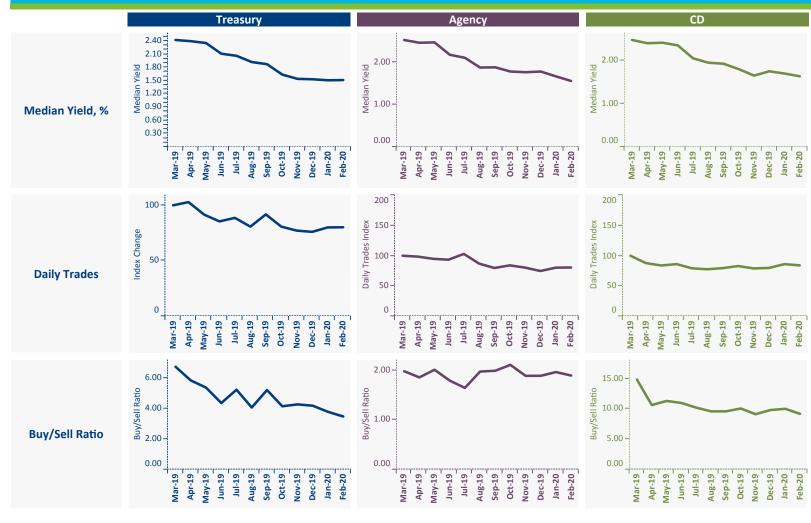
WA Yield = "Weighted Average Yield"

Source: TRACE, RTRS (MSRB's Real-time Transactional Reporting System) and Tradeweb Direct

- -The yields in each cell for Corporate/Agency/Municipal are the weighted average yield based on odd-lot customer buy transcations reported in TRACE/MSRB.
- -The yields in each cell for Treasury/CD are the weighted average yield based on buy transactions on the Tradeweb Direct Platform.
- -The weights are based on transaction size.
- -Yield summaries for Corporate and Agency exclude transactions in callable or floating-rate coupon bonds.
- -Yield summaries for Municipal exclude transactions in taxable bonds.
- -See appendix for the definition of maturity and rating buckets.



Treasury, Agency, CD Transaction Trend Summary



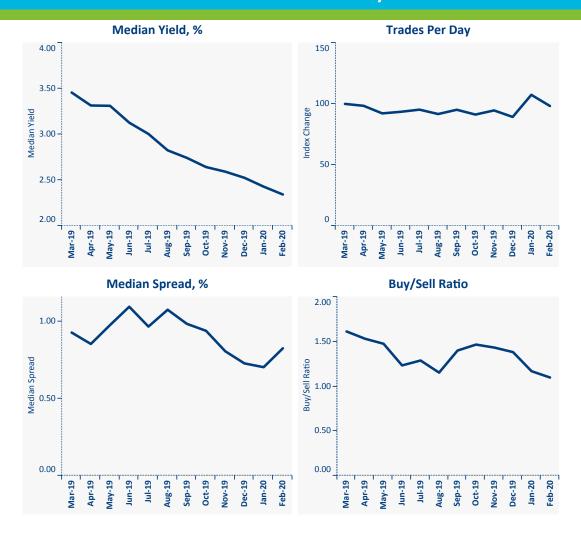
Daily Trades: First month = 100 Source: TRACE and Tradeweb Direct



⁻Treasury and CD are based on transactions on the Tradeweb Direct Platform. Median yields are based on all customer buy transactions.

⁻Agency is based on odd-lot customer transactions (<100M) reported in TRACE. Median yields are based on all odd-lot customer buy transactions.

Corporate Bonds: Odd-Lot Customer Transaction Trend Summary



Daily Trades: First month = 100 Source: TRACE and Tradeweb Direct



⁻Based on odd-lot customer transactions (<100M) reported in TRACE.

⁻Median yields and spreads are based on all odd-lot customer buy transactions...

Municipal Bonds: Odd-Lot Customer Transaction Trend Summary



Daily Trades: First month = 100

Source: RTRS (MSRB's Real-time Transaction Reporting System) and Tradeweb Direct



⁻Based on odd-lot customer transactions (<100M) reported in MSRB.

⁻Median yields and spreads are based on all odd-lot customer buy transactions.

⁻Spread for each transaction is calculated against the Treasury yield for the same maturity.

Corporate Bonds: Top 20 Most Active Issuers

February 2020

Index	Ticker	Company	Rating Key (Med)	Issues Traded	% of Total Trades	Trades	Buy/Sell Ratio	Dollar Vol. Traded (MM)	1Y Yield (Buy)	3Y Yield (Buy)	5Y Yield (Buy)	10Y Yield (Buy)	20Y Yield (Buy)
1	JPM	JP MORGAN CHASE	BBB	685	3.1%	14,227	1.2	318	1.6	1.7	1.9	2.4	2.9
2	GS	GOLDMAN SACHS	ВВВ	1,025	3.0%	14,123	1.0	307	1.7	1.8	2.3	3.0	3.7
3	С	CITIGROUP	ВВВ	433	2.3%	10,641	1.1	239	1.7	1.8	2.1	2.6	3.1
4	BNKQ	Null	A	399	2.2%	10,162	1.3	229	1.7	1.8	2.2	2.4	3.4
5	WFC	WELLS FARGO	A	232	1.8%	8,229	1.1	180	1.7	1.8	2.0	2.3	3.3
6	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	ВВВ	310	1.7%	7,712	1.0	172	1.8	2.0	2.4	3.2	3.7
7	MS	MORGAN STANLEY	ВВВ	866	1.6%	7,316	0.8	164	1.7	1.8	2.0	2.6	3.1
8	Т	AT&T	ВВВ	109	1.5%	6,823	0.9	156	1.7	1.8	2.1	2.7	3.6
9	GM	GENERAL MOTORS FINANCIAL COMPANY INC	ВВВ	110	1.2%	5,662	1.3	141	1.9	2.3	2.6	3.3	4.5
10	BRK	BERKSHIRE HATHAWAY	BBB	148	1.2%	5,628	1.2	148	1.5	1.7	2.4	3.1	4.5
11	AAPL	APPLE INC	AA	49	1.2%	5,535	1.2	119	1.5	1.6	1.7	2.0	2.9
12	F	FORD	BBB	268	1.1%	5,239	1.5	120	2.5	2.6	3.5	4.7	5.4
13	LTD	LIMITED BRANDS INC	ВВ	10	1.1%	5,059	0.3	100	2.2	2.7		5.2	6.8
14	VZ	VERIZON	BBB	124	1.0%	4,682	1.0	99	1.6	1.7	1.8	2.3	2.9
15	CVS	CVS CAREMARK CORP	BBB	44	0.9%	4,306	1.3	94	1.7	1.9	2.1	2.7	3.4
16	PEMX	PETROLEOS MEXICANOS	BBB	43	0.9%	4,183	1.2	138	2.0	2.9	4.0	5.1	6.1
17	CMCS	COMCAST	A	61	0.8%	3,946	1.1	90	1.7	1.7	1.8	2.2	2.9
18	MET	METLIFE	BBB	20	0.8%	3,507	1.3	72		1.7	1.7		3.0
19	MSFT	MICROSOFT CORP	AAA	35	0.7%	3,391	1.1	77	1.4	1.5	1.7		2.6
20	ORCL	ORACLE CORP	A	26	0.7%	3,195	1.0	61	1.6	1.6	1.8	2.0	2.7

Source: TRACE and Tradeweb Direct





⁻Based on odd-lot customer transactions (<100M) reported in TRACE.

⁻Issuer ratings are based on median rating of traded bonds from each issuer. Bond ratings are from Moody's and S&P.

Corporate Bonds: Top 20 Issuers with Highest Buy/Sell Ratio

February 2020

Index	Ticker	Company	Rating Key (Med)	Issues Traded	% of Total Trades	Trades	Trades (Buy)	Trades (Sell)	Buy/Sell Ratio	Dollar Vol. Traded (MM)	1Y Yield (Buy)	3Y Yield (Buy)	5Y Yield (Buy)	10Y Yield (Buy)	20Y Yield (Buy)
1	CRK	COMSTOCK RES INC	В	1	0.4%	1,896	1,719	177	9.7	20					
2	FLR	FLUOR CORP NEW	BBB	2	0.4%	1,728	1,550	178	8.7	43			3.7	4.6	
3	TUP	TUPPERWARE BRANDS CORP	В	1	0.3%	1,277	1,004	273	3.7	27	5.3				
4	Х	UNITED STS STL CORP NEW	В	3	0.5%	2,537	1,966	571	3.4	35			8.8		8.6
5	CC	Null	В	3	0.3%	1,515	1,171	344	3.4	28		6.3	7.2		
6	EQT	EQT CORP	ВВ	11	0.6%	2,959	2,271	688	3.3	58		5.6	8.0	8.6	
7	CNP	CENTERPOINT ENERGY INC	BBB	31	0.3%	1,244	946	298	3.2	31	2.0	1.9	2.0	4.3	5.1
8	QRTEA	Null	ВВ	10	0.3%	1,582	1,199	383	3.1	34		2.8	3.5	7.6	5.9
9	BA	BOEING CO	BBB	47	0.4%	1,863	1,396	467	3.0	49	1.8	1.9	2.1	2.5	3.0
10	AMT	AMERICAN TOWER CORP NEW	BBB	22	0.3%	1,285	897	388	2.3	28	1.7	1.9	2.1	2.6	
11	PSEC	PROSPECT CAP CORP INTERNOTES BOOK ENTRY	BBB	147	0.2%	1,152	787	365	2.2	22		3.1	4.0	4.5	4.1
12	ETP	ENERGY TRANSFER PARTNERS L P	BBB	41	0.5%	2,120	1,421	699	2.0	50	1.9	2.1	2.6	3.4	4.7
13	LNC	LINCOLN NATL CORP IND	BBB	14	0.2%	1,107	742	365	2.0	25	1.6	1.8	2.1	2.4	3.5
14	AMGN	AMGEN INC	BBB	33	0.5%	2,294	1,534	760	2.0	47	1.6	1.8	1.8	2.1	3.3
15	RIG	TRANSOCEAN INC	С	18	0.2%	1,141	751	390	1.9	14	4.2	6.1		13.7	11.6
16	FDX	FEDEX CORP	BBB	24	0.3%	1,403	921	482	1.9	34		1.8	2.0	2.6	3.8
17	APC	ANADARKO PETE CORP	BBB	69	0.5%	2,302	1,440	862	1.7	52	1.9	2.0	2.4	3.7	4.3
18	FITB	FIFTH THIRD BANCORP	BBB	15	0.3%	1,217	762	455	1.7	24	1.6	1.9	2.0	2.3	3.6
19	WAG	WALGREEN CO	BBB	8	0.3%	1,327	828	499	1.7	28		1.9	2.3		4.3
20	CAT	CATERPILLAR	Α	106	0.4%	1,795	1,100	695	1.6	37	1.6	1.6	1.7	2.2	2.9

Source: TRACE and Tradeweb Direct



⁻Based on odd-lot customer transactions (<100M) reported in TRACE.

⁻The top 20 issuers are selected among the top 100 most active issuers in odd-lot TRACE.

⁻Issuer ratings are based on median rating of traded bonds from each issuer. Bond ratings are from Moody's and S&P.

Corporate Bonds: Top 20 Issuers with Lowest Buy/Sell Ratio

February 2020

Index	Ticker	Company	Rating Key (Med)	Issues Traded	% of Total Trades	Trades	Trades (Buy)	Trades (Sell)	Buy/Sell Ratio	Dollar Vol. Traded (MM)	1Y Yield (Sell)	3Y Yield (Sell)	5Y Yield (Sell)	10Y Yield (Sell)	20Y Yield (Sell)
1	TRP	TRANSCANADA PIPELINES LTD	BBB	29	0.5%	2,330	408	1,922	0.21	24	2.0	1.9	2.2	2.5	3.5
2	LTD	LIMITED BRANDS INC	ВВ	10	1.1%	5,059	1,013	4,046	0.25	100	2.6	3.0		5.6	6.6
3	TSLA	TESLA MTRS INC	В	6	0.4%	2,073	411	1,662	0.25	55				10.3	
4	FTR	FRONTIER COMMUNICATIONS CORP	С	27	0.4%	1,698	438	1,260	0.35	21	78.4	48.3	30.5	20.4	17.9
5	PTRB	PETROBRAS	ВВ	21	0.4%	1,873	657	1,216	0.54	80	2.4	2.6	2.8	3.6	4.9
6	BCS	BARCLAYS	N/R	563	0.4%	1,869	685	1,184	0.58	42	2.2	2.7	2.5	2.9	
7	DELL	DELL	ВВ	9	0.3%	1,353	517	836	0.62	29	2.4	2.7		3.0	5.4
8	CTL	CENTURYLINK	В	28	0.5%	2,144	844	1,300	0.65	53	2.7	3.3	3.9	5.7	6.8
9	НВС	HSBC	BBB	457	0.5%	2,306	947	1,359	0.70	51	1.8	1.8	2.6	3.4	3.4
10	VIA	VIACOM INC NEW	BBB	37	0.3%	1,252	517	735	0.70	31	1.8	2.0	2.1	2.6	3.9
11	BBBY	BED BATH & BEYOND INC	ВВ	3	0.3%	1,624	679	945	0.72	30			4.1		7.6
12	MS	MORGAN STANLEY	BBB	866	1.6%	7,316	3,151	4,165	0.76	164	1.8	1.9	2.0	2.7	3.1
13	RY	ROYAL BANK OF CANADA	Α	213	0.4%	1,707	756	951	0.79	41	1.7	1.7	1.9	3.9	3.3
14	GT	GOODYEAR TIRE & RUBBER	В	5	0.2%	1,127	500	627	0.80	23	3.3	4.0		5.3	
15	KMI	KINDER MORGAN ENERGY PARTNERS L P	BBB	63	0.3%	1,572	703	869	0.81	35	2.0	2.0	2.2	3.6	4.2
16	CS	CREDIT SUISSE	N/R	349	0.2%	1,143	515	628	0.82	22	4.0	2.8	2.1	2.4	2.8
17	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	BBB	42	0.5%	2,176	996	1,180	0.84	54	1.9	1.7	2.0	2.4	3.2
18	Т	AT&T	BBB	109	1.5%	6,823	3,127	3,696	0.85	156	1.8	1.8	2.1	2.8	3.7
19	HPQ	HEWLETT PACKARD	BBB	19	0.4%	1,821	846	975	0.87	42	2.0	2.0	2.3	4.0	4.9
20	XRX	XEROX CORP	ВВ	9	0.3%	1,233	572	661	0.87	30	2.9	2.9	3.3		5.8

Source: TRACE and Tradeweb Direct



⁻Based on odd-lot customer transactions (<100M) reported in TRACE.

⁻The top 20 issuers are selected among top 100 most active issuers in odd-lot TRACE.

⁻Issuer ratings are based on median rating of traded bonds from each user. Bond ratings are from Moody's and S&P.

Corporate Bonds: Top 20 Most Bought Issues

February 2020

Index	Ticker	Company	Maturity	Rating Key (Med)	Coupon	Trades (Buy)	Trades (Sell)	Trades	Dollar Vol. Traded (MM)	Yield (Buy)	Yield (Sell)	Price (Buy)	Price (Sell)
1	CRK	COMSTOCK RES INC	Aug-26	В	9.750	1,719	177	1,896	20	12.5	12.6	88.0	87.7
2	Х	UNITED STS STL CORP NEW	Aug-25	В	6.875	1,018	209	1,227	18	8.8	8.4	91.6	93.5
3	TUP	TUPPERWARE BRANDS CORP	Jun-21	В	4.750	1,004	273	1,277	27	5.3	13.5	99.3	90.2
4	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Null	BBB	5.000	982	443	1,425	35	5.0	5.0	100.4	99.6
5	FLR	FLUOR CORP NEW	Sep-28	BBB	4.250	961	119	1,080	29	4.6	4.1	97.9	101.2
6	Х	UNITED STS STL CORP NEW	Mar-26	В	6.250	814	256	1,070	13	9.5	9.2	85.3	86.4
7	GS	GOLDMAN SACHS	Feb-25	BBB	3.750	700	18	718	20	3.2	3.4	102.3	101.7
8	CC	Null	May-25	В	7.000	673	222	895	18	7.2	7.4	99.3	98.1
9	MET	METLIFE	Jun-27	BBB	3.700	612	272	884	20	3.2	3.3	103.2	102.4
10	FLR	FLUOR CORP NEW	Dec-24	BBB	3.500	589	59	648	14	3.7	3.6	99.2	99.6
11	LNC	LINCOLN NATL CORP IND	May-66	BBB	4.049	566	201	767	17			92.5	91.4
12	MET	METLIFE	Jun-47	BBB	4.700	557	407	964	22	4.7	4.8	99.9	98.0
13	QRTEA	Null	Feb-27	ВВ	4.750	525	33	558	9	4.4	4.5	101.9	101.5
14	AMGN	AMGEN INC	Feb-27	BBB	2.200	512	3	515	10	1.9	2.0	102.0	101.0
15	F	FORD	Dec-46	BBB	5.291	510	131	641	17	5.5	5.6	97.3	96.1
16	RIG	TRANSOCEAN INC	Apr-31	С	7.500	509	122	631	6	13.7	12.5	65.0	70.3
17	TDG	TRANSDIGM INC	Jul-24	В	6.500	500	23	523	6	1.8	2.5	103.6	103.3
18	IEP	ICAHN ENTERPRISES	May-26	ВВ	6.250	477	29	506	12	4.2	4.6	107.2	106.3
19	JPM	JP MORGAN CHASE	Dec-49	BBB	4.600	470	65	535	16	4.4	4.4	103.9	103.5
20	CBL	CBL & ASSOCS LTD PARTNERSHIP	Dec-26	В	5.950	458	296	754	5	20.1	20.6	48.6	47.4

Source: TRACE and Tradeweb Direct



⁻Based on odd-lot customer transactions (<100M) reported in TRACE.

⁻Ratings (AAA, AA, A, BBB, BB, B, C) are based on aggregate ratings from Moody's and S&P (when available).

Corporate Bonds: Top 20 Most Sold Issues

February 2020

Inde	x Ticker	Company	Maturity	Rating Key (Med)	Coupon	Trades (Buy)	Trades (Sell)	Trades	Dollar Vol. Traded (MM)	Yield (Buy)	Yield (Sell)	Price (Buy)	Price (Sell)
1	LTD	LIMITED BRANDS INC	Nov-35	ВВ	6.875	149	2,111	2,260	36	6.6	6.6	102.8	102.3
2	TRP	TRANSCANADA PIPELINES LTD	Aug-76	BBB	5.875	113	1,644	1,757	6			109.7	109.3
3	TSLA	TESLA MTRS INC	Mar-22	В	2.375	7	1,221	1,228	33			250.5	282.8
4	SPN	SESI L L C	Dec-21	С	7.125	29	606	635	13	16.1	16.2	86.1	86.0
5	LTD	LIMITED BRANDS INC	Mar-33	В	6.950	290	601	891	14	7.8	7.7	93.0	93.8
6	WIN	WINDSTREAM CORP	Oct-23	С	8.250	91	501	592	8	9.9	9.3	95.1	96.9
7	ETFC	E TRADE FINL CORP	Null	ВВ	5.875	146	456	602	12	5.4	5.4	109.6	109.0
8	BBBY	BED BATH & BEYOND INC	Aug-34	ВВ	4.915	317	451	768	14	7.1	7.3	80.4	78.6
9	GS	GOLDMAN SACHS	Dec-49	ВВ	0.000	55	449	504	2	5.6	5.8	100.2	100.1
10	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Null	BBB	5.000	982	443	1,425	35	5.0	5.0	100.4	99.6
11	MET	METLIFE	Jun-47	BBB	4.700	557	407	964	22	4.7	4.8	99.9	98.0
12	M	MACYS RETAIL HLDGS INC	Feb-23	BBB	2.875	82	385	467	11	2.7	3.0	100.4	99.8
13	TSLA	TESLA MTRS INC	Aug-25	N/R	5.300	394	362	756	17			102.6	102.0
14	ECA	ENCANA CORP	Jan-22	BBB	5.750	16	355	371	4	2.2	2.4	106.8	106.3
15	SFTBF	SPRINT	Nov-28	В	6.875	90	349	439	13	6.5	4.3	102.5	119.0
16	TEVA	TEVA PHARMACEUTICAL FIN CO B V	Feb-36	ВВ	6.150	324	343	667	18	5.8	6.0	103.5	101.3
17	AAPL	APPLE INC	May-23	AA	2.400	302	336	638	13	1.6	1.6	102.5	102.4
18	WFC	WELLS FARGO	Null	BBB	5.570	126	335	461	9	5.5	5.5	101.7	101.4
19	GD	GENERAL DYNAMICS CORP	May-21	Α	3.000	135	332	467	6	1.6	1.8	101.7	101.5
20	GT	GOODYEAR TIRE & RUBBER	Nov-23	В	5.125	123	330	453	7	3.1	4.0	101.5	100.8

Source: TRACE and Tradeweb Direct



⁻Based on odd-lot customer transactions (<100M) reported in TRACE.

⁻Ratings (AAA, AA, A, BBB, BB, B, C) are based on aggregate ratings from Moody's and S&P (when available).

Appendix

Maturity

We consider the following maturity ranges for maturity buckets. TTM is Time to Maturity in years.

1Y: 0.5 <= TTM <= 1.5 3Y: 2 <= TTM <= 4 5Y: 4 < TTM <= 6 10Y: 7.5 <= TTM <= 12.5 20Y: 15 <= TTM <=25

Rating

Rating buckets (AAA, AA, A, BBB, HY) in yield matrix are based on agggregate ratings from Moody's and S&P (when available).

For Corporate, we only consider transactions in bonds that are rated by both rating agencies.

- -Corporate AAA: Bonds rated AAA by both rating agencies.
- -Corporate AA: Bonds rated AA by both rating agencies.
- -Corporate A: Bonds rated A by both rating agencies.
- -Corporate BBB: Bonds rated BBB by both rating agencies.
- -Corporate High Yield: Bonds rated High Yield by both rating agencies.

(Transactions in corporate bonds that are rated as AA by one agency and as A by another agency are excluded.)

- -Municipal AAA: Bonds rates AAA by both rating agencies, or AAA by one agency and not rated by another agency.
- -Municipal AA: Bonds rated AA by both rating agencies, or AA by one agency and not rated by another agency.
- -Municipal A: Bonds rated A by both rating agencies, or A by ones agency and not rated by another agency.
- -Municipal BBB: Bonds rated High Yield by both rating agencies, or BBB by one agency and not rated by another agency.
- -Municipal High Yield: Bonds rated High Yield by both rating agencies, or High Yield by one agency and not rated by another agency.

(Transactions in municipal bonds that are rated as AA by one agency and as A by another agency are excluded.)

(Transactions in municipal bonds that are rated as AA by one agency and not rated by the other agency are included.)



Disclosures

This report represents certain customer trades in securities that have been reported by dealers to FINRA's Trade Reporting and Compliance Engine ("TRACE"), and the Municipal Securities Rulemaking Board ("MSRB"). The report does not necessarily reflect all transactions that were effected on dates noted. There is the possibility of errors or delays in the trade submission process. Prices for transactions vary with market conditions and can be affected by trade size and other factors. The information provided has been obtained from sources deemed to be reliable, however Tradeweb Direct does not guarantee the accuracy of the information contained in this report.

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